RECONNAISSANCE REPORT FOR SECTION 205 FLOOD CONTROL

EAST BRANCH OF THE SOUTH BRANCH OF THE KISHWAUKEE RIVER DE KALB COUNTY, ILLINOIS

JUNE 1988

US Army Corps of Engineers
Rock Island District

DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
CLOCK TOWER BUILDING – P.O. BOX 2004
ROCK ISLAND, ILLINOIS 61204-2004

REPLY TO
ATTENTION OF

CENCR-PD-P

RECONNAISSANCE REPORT
FOR
SECTION 205 FLOOD CONTROL

EAST BRANCH OF THE SOUTH BRANCH OF THE KISHWAUKEE RIVER
DE KALB COUNTY, ILLINOIS

JUNE 1988

ACKNOWLEDGEMENT

Primary study team personnel who are familiar with the technical aspects of the study are listed below:

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SYLLABUS

In a letter dated June 29, 1979, De Kalb County, Illinois, requested that the Rock Island District investigate the flooding problem of the Evergreen Village Mobile Home Park along the South Branch of the East Branch of the Kishwaukee River near Sycamore under Section 205 of the 1948 Flood Control Act, as amended.

The Corps completed an initial study in 1981 which determined that there was an economically feasible solution. However, the substantial financial investment required by the local sponsor was beyond their funding capabilities and the study was terminated.

The county board passed a resolution in 1984 supporting an additional study based on the willingness of the State of Illinois, Department of Transportation, Division of Water Resources, to aid in funding the local sponsor's portion of the plan. A February 3, 1987, letter from De Kalb County requested that the Corps initiate the next study phase. In response to that request, the Corps conducted this study.

Permanent evacuation of the mobile home park was evaluated and determined to be economically infeasible. Other nonstructural plans are not suited to this situation. Structural flood damage reduction measures were not evaluated because Federal policy views protection of mobile home parks as providing protection for beneficiaries, and this type of benefit is not considered to be in the Federal interest. In addition, since the mobile home park is located adjacent to the river, protection would have to be constructed in the floodway which is not in accordance with State of Illinois regulatory criteria and which would require major mitigation efforts.

Since no flood damage reduction alternatives warrant additional study, the study will be terminated.

RECONNAISSANCE REPORT
FOR
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EAST BRANCH OF THE SOUTH BRANCH OF THE KISHWAUKEE RIVER
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RECONNAISSANCE REPORT
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EAST BRANCH OF THE SOUTH BRANCH OF THE KISHWAUKEE RIVER
DE KALB COUNTY, ILLINOIS

SECTION 1 - INTRODUCTION

This report presents the results of an investigation of the flooding problems along the East Branch of the South Branch of the Kishwaukee River within De Kalb County, Illinois. The area specifically addressed is a mobile home park outside the village of Sycamore, Illinois. The county requested the study in a letter to the Rock Island District dated February 3, 1987.

STUDY AUTHORITY

The Corps of Engineers has the authority to construct certain projects without the specific authorization of Congress. The authority for this report is Section 205 of the 1948 Flood Control Act, as amended.

STUDY PURPOSE AND SCOPE

The purpose of the reconnaissance study is to define the flooding problem, identify potential solutions, and determine whether there is a Federal interest in a flood damage reduction plan, based on a preliminary appraisal of costs, benefits, and environmental impacts. The reconnaissance study phase is also the appropriate time to assess the level of interest and support in the potential solution by non-Federal interests.

STUDY AREA

The study area is located in De Kalb County, Illinois, east of the village limits of Sycamore. The De Kalb County Board is primarily concerned with flooding in Section 33 of Sycamore Township at a property commonly known as the Evergreen Village Mobile Home Park located on State Highway 64 (plate 1).

STUDY DURATION

This study was conducted over a 12-month period.

TYPE, DEPTH, AND DETAIL OF INVESTIGATION

The following areas were emphasized in this reconnaissance phase study: hydrology and hydraulics, design and cost estimates, and economics (benefit analysis). A brief environmental review also was conducted. The study was conducted in sufficient detail to determine if there is a Federal interest in a flood reduction plan for the study area. Federal interest is determined by economic feasibility, environmental impacts, acceptability, and willingness of the local sponsor to cost-share further studies and/or construction.

RELATED STUDIES, REPORTS, AND EXISTING WATER PROJECTS

South Branch Kishwaukee River Flood Plain Information Report, De Kalb County, Illinois, prepared for the State of Illinois, Division of Waterways, Department of Public Works and Buildings, by the U.S. Army Corps of Engineers, Rock Island District, June 1971. This report evaluates the flood situation along the South Branch and the East Branch of the South Branch of the Kishwaukee River in De Kalb County, Illinois. The study reviews the records of the largest known floods and estimates possible future floods.

Flood Insurance Study, City of Sycamore, Illinois, De Kalb County, U.S. Department of Housing and Urban Development, Federal Insurance Administration, July 1983. In this report, the existence and severity of the flood hazards in Sycamore are discussed in detail, along with the results of the pertinent hydraulic analyses. The primary purpose of the information contained in this report was to justify the inclusion of Sycamore into the Flood Insurance Program of the Federal Insurance Administration. An additional purpose was to provide information which could be used by local and regional planners in their efforts to promote sound land use and floodplain development. The report does not contain any flood damage information, nor any recommendations for flood protection measures.

South Branch Kishwaukee River Near Sycamore, De Kalb County, Illinois, Reconnaissance Report for Section 205 Flood Control Project, U.S. Army Corps of Engineers, Rock Island District, October 1981. This report identified a potential nonstructural solution to the flooding problem and recommended additional study.

ASSESSMENT OF WATER AND LAND RESOURCE PROBLEMS AND OPPORTUNITIES

EXISTING CONDITIONS

General

The Evergreen Mobile Home Park, located along U.S. Highway 64 just east of the village limits of Sycamore, contains 153 manufactured homes. The lots on which the homes are located are owned by the owner of the park. Each individual home is owner-occupied.

The study area has been flooded several times recently. High water occurred in March 1979 and again in July 1983. Both of these floods approximated a 25- to 50-year frequency. During each of these floods, the mobile home park was evacuated because of the inconvenience of reaching homes, the potential health hazard of the park's sewage treatment plant being flooded, and disconnected utility service to the park.

Hydrology and Hydraulics

The drainage area of the East Branch of the South Branch of the Kishwaukee River is 111 square miles at the limits of the study area. The river flows in a northerly direction past the mobile home park. Estimated discharge frequency values for various frequencies of floods are shown below. Additional hydrologic and hydraulic information is contained in appendix A.

Flood Frequency	Discharge (ft3/s)	Elevation (Feet NGVD)*
2-year	1,900	830.0
10-year	4,060	832.9
50-year	5,920	835.0
100-year	6,700	835.6
500-year	8,390	836.0

* National Geodetic Vertical Datum of 1929

Human Resources, Development, and Economy

The study area is situated in De Kalb County in northeastern Illinois, approximately 6 miles northeast of the city of De Kalb and adjacent to the village of Sycamore. Specific data regarding the study area were not available for this analysis; therefore, socio-economic data for the city of De Kalb were examined to gain a better understanding of human resources in the area.

The city of De Kalb serves as the county's primary manufacturing and retail center. The community features nearly 30 industries and 4 major retail-service centers. The areas's largest employer, Northern Illinois University (NIU), had a on-campus enrollment in excess of 22,000 in 1985. The University provides quality education and cultural and athletic opportunities for community residents.

De Kalb experienced a rapid population growth in the 1960's following expansion of academic programs at NIU. The rate of population growth declined sharply during the following decade, however. Population in both the community and De Kalb County have declined since 1980. Area population trends are summarized in table 1.

TABLE 1

Population Trends for the Study Area and Surrounding Vicinity

	Population			Population Estimate	Percent Change
Area	1960	1970	1980	1990	1980-1990
City of De Kalb	18,500	32,900	33,100	33,000	-0.2
Village of Sycamore	7,000	7,800	9,200	9,200	0.0
De Kalb County	51,700	71,700	74,600	73,500	-1.4
State of Illinois	10,081,200	11,110,300	11,426,500	11,711,700	+2.5

In 1987, per capita income for the city of De Kalb was estimated at $9,200. This amount was somewhat less than that of De Kalb County ($10,300). This discrepancy in per capita income may be explained by the city's large student population, which is typically less affluent than other population sectors.

The city of De Kalb is situated along multi-lane Interstate Highway 88 and lies approximately 60 miles west of Chicago. In addition to I-88, State Highways 38, 23, and 64 also provide access to the community. Rail service is provided by the Chicago and North Western Transportation Company, which operates an east-west mainline, a southern sub-mainline, and a northern spur to the nearby village of Sycamore. Scheduled commercial air transportation is available through airports in Rockford (45 miles) and Chicago (60 miles).

Environmental Setting and Natural Resources

Geology and Soils

In De Kalb County, the soils have been derived from Wisconsin Age glacial till, glacial outwash, loess, and alluvium. The Sawmill soil series comprises the surface material of the subject area. This soil is found on nearly level, low-lying bottomland which is subject to frequent flooding from the East Branch of the South Branch of the Kishwaukee River. The surface layer and subsoil is typically a silty clay loam. The underlying material is generally clay loam with strata of sand and gravel. The bedrock beneath the subject area is Ordovician Age and is assigned to the Maquoketa and Galena Groups.

Climatology

The area's climate is characterized by cold winters and warm, humid summers. The average precipitation is 35.6 inches, and average snowfall is 31 inches. The prevailing winds are west-northwest from November through May and south-southwest from June through October. The average daily temperature is 54 degrees F., with the maximum recorded being 110 degrees F. Temperatures of 10 to 15 degrees below zero do occur during winter months.

Air and Noise Quality

Air and noise quality is generally good.

Fish and Wildlife

In the vicinity of the mobile home park, trees and brush cover are moderate and mostly in the river area. The area can be described as semi-urban, of moderate wildlife value, and supporting and attracting small mammals and occasional large migrating birds.

Threatened and Endangered Species

The only federally listed endangered species reported to have statewide distribution in Illinois is the Indiana bat (Myotis sodalis). In the winter, Indiana bats use caves as roosting areas. There are no caves in the project area. If Indiana bats were in the area during the summer, they would be in maternity colonies. The colonies typically roost in wooded riparian habitats under large slabs of exfoliated bark on dead, dying, or mature trees. Indiana bat habitat has been further defined as mature woodlands, preferably 30 meters deep on both sides of the stream and a foraging range of 0.8 km to 1.2 km. Wooded areas along the river in the vicinity of the project fall far short of fulfilling these requirements. Therefore, Indiana bats are not expected to be in the study area.

FUTURE CONDITIONS WITHOUT PROJECT

The Evergreen Mobile Home Park will continue to be subject to flooding. If the floods are serious enough, the residents will have to be evacuated and the utility service disconnected. The residents will likely remain in the floodplain since serious damages do not occur every year. There are no anticipated changes in the environmental setting or natural resources.

PROBLEMS, NEEDS, AND OPPORTUNITES

The water resource problem considered in this study is the flooding of the study area by the South Branch of the East Branch of the Kishwaukee River.

The county's request for Corps of Engineers assistance is contained in Appendix C - Pertinent Correspondence. The county's interest in seeking a solution to this flooding problem began with the 1979 request. Based on that request, the Corps completed a study in 1981 which determined that there was an economically feasible solution to the flooding problem. However, implementation of a permanent evacuation plan required a substantial investment by the local sponsor which was beyond their funding capabilities. The study was therefore terminated.

In 1984 the county board passed a resolution supporting additional study based on the willingness of the State of Illinois Department of Transportation, Division of Water Resources, to aid in funding the local sponsor's portion of the plan. This reconnaissance study was initiated in 1987.

PLANNING OBJECTIVES

NATIONAL OBJECTIVE

The national objective of water and related land resources planning is to contribute to economic development consistent with protecting the Nation's environment. Contributions to National Economic Development (NED) are increases in the net value of the national output of goods and services, expressed in monetary units. Contributions to NED are the direct benefits and costs that accrue in the planning area and the rest of the Nation, and include increases in the net value of those goods and services that are marketed.

SPECIFIC OBJECTIVE

The specific planning objective for this study is to reduce economic losses associated with flooding of De Kalb County, specifically in the vicinity of the Evergreen Village Mobile Home Park.

PLANNING CONSTRAINTS

The Section 205 authority provides for the construction of projects for flood control and related purposes. Each project is limited to a Federal investment of not more that $5 million, including all project-related costs for investigation, inspection, engineering, preparation of plans and specifications, supervision and administration, and construction.

Water resources planning studies are bound by all State and Federal laws and Executive Orders.

ALTERNATIVE PLANS

AVAILABLE MEASURES

The available measures used to alleviate flooding include both nonstructural and structural means. Nonstructural measures are defined as those which reduce or avoid flood damages, without significantly altering the nature or extent of flooding, by changing the use of floodplains, or accommodating existing uses to the flood hazard. Examples of nonstructural measures are floodproofing, permanent evacuation, and regulation of floodplain uses.

Permanent evacuation was the nonstructural alternative considered in this study. Floodproofing was considered in a previous study and was determined to be inappropriate because residences would remain inaccessible during flood periods.

Structural measures include dams and reservoirs, levees, dikes, walls, diversion channels, bridge modifications, and channel alterations. All such measures reduce the frequency of damaging overflows. Corps of Engineers' policy does not allow participation in a structural plan which protects a single beneficiary. A mobile home park is specifically defined as a single beneficiary; therefore, no structural measures were examined in this study phase.

DEVELOPMENT OF ALTERNATIVE PLANS

FORMULATION CRITERIA

Formulated plans must contribute to the Federal objective of NED. One of these plans must reasonably maximize contributions to NED, and the remaining plans may be formulated in order to further address certain Federal, State, and local concerns not fully addressed by the NED plan. All plans should be formulated in consideration of completeness, effectiveness, efficiency, and acceptability.

DESCRIPTION OF PLANS

Nonstructural plans were the only type considered for this study. Permanent evacuation is the appropriate type of nonstructural means for this case. Various alternatives were examined in a previous Corps study. Floodproofing would leave residences inaccessible during floods, making this alternative unacceptable. Therefore, permanent evacuation was the only type of alternative examined.

Permanent Evacuation

Permanent evacuation can be accomplished in a variety of ways. The basic plan is to permanently evacuate the mobile homes from the floodplain. Variations involve constructing a new flood-free park for the residents to move to or dispersing the residents into existing vacancies in the area. Another variation is a combination of the two, assuming some homes are moved to a new park and the remaining residents would utilize existing vacancies in the area.

Plan 1 - Permanent Evacuation (New Park Constructed)

This plan provides for the permanent evacuation of the mobile home park residents. A new park would be constructed on a site within 3 to 4 miles of the existing park. For the purpose of analysis, it was assumed that all residents would move to the new park. The existing park would be returned to agricultural use.

The major cost items are acquisition of the Evergreen Village Mobile Home Park and the 153 mobile homes, acquisition of a site for the new park, preparation of the new site, and demolition of the existing site. A major benefit category was the value of the residences in their new location. It was assumed their value would increase by approximately 10 percent when relocated to a flood-free area.

The first cost of this plan is $5,011,000. Table 2 contains a summary of costs.

TABLE 2

Summary of Costs
Permanent Evacuation and Relocation of Mobile Home Park

Item	Costs
Acquisition (Land and Improvements)	$2,975,500
Preparation of Relocation Sites	909,000
Transfer of Structures to Relocation Sites	212,200
Conversion of Vacated Floodplain Lands to New Use	161,400
Contingencies	320,800
Engineering and Design	192,000
Supervision and Administration	240,000
Total	$5,011,000

Average annual costs equal $473,400 and annual benefits equal $417,000. The benefit-to-cost ratio is 0.88. A description of the benefits and the economic analysis is contained in appendix B.

Plan 2 - Permanent Evacuation (No New Park Constructed)

Under this plan, all 153 mobile homes and the Evergreen Village Mobile Home Park (business) would be acquired. The existing park would be returned to agricultural use.

Residents would relocate to alternative housing in the area. There are sufficient vacancies in the county to absorb these residents if the project were implemented over a 2- to 3-year period. The housing vacancies would include both mobile homes and traditional housing. A significant portion of the cost of this plan is the relocation assistance provided to residents under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646). The purpose of relocation assistance is to provide relocated persons with housing that is at least equal to that from which they moved. Those who live in substandard housing would be aided financially so they may move into housing that meets minimum standards with respect to decency, safety, and sanitation. The benefits are paid in addition to the acquisition price of the property. These payments are not included as an economic cost in the benefit-to-cost ratio.

The major cost categories are acquisition of the residences and the business and demolition of the existing park. A summary of the costs is contained in table 3.

TABLE 3

Cost Estimate
Permanent Evacuation (No New Park Constructed)

Item	Costs
Acquisition	
Land and Improvements	$2,975,600
Relocation Assistance	2,238,500
Removal of Structures from the Floodplain (Net of Salvage Value)	(-459,000)
Conversion of Vacated Lands to New Use	164,400
Contingencies	40,400
Engineering and Design	24,300
Supervision and Administration	30,300
Total	$5,470,500

The total cost of this plan is $5,470,500. Public Law 91-646 costs are $2,238,500 of that total. An estimated salvage value of $3,000 per trailer ($459,000) is subtracted from the first cost. Therefore, the economic cost is $3,232,000. The average annual cost is $289,900 and the annual benefits equal $118,300. The benefit-to-cost ratio is 0.42.

EVALUATION OF ALTERNATIVE PLANS

Neither variation or type of permanent evacuation plan have positive net benefits. The third plan, discussed briefly, would have a benefit-to-cost ratio between 0.4 and 0.8, since it is a combination of the two plans evaluated.

There is no flood damage reduction plan that has benefits which exceed costs. A summary of the costs and benefits is displayed in table 5.

TABLE 4

Permanent Evacuation
Economic Summary ($)

Plan	Total First Cost	Average Annual Costs	Annual Benefits	Net Benefits	Benefit-to-Cost Ratio
1	5,011,000	443,400	417,000	-26,400	0.88
2	5,470,500	289,900	118,300	-171,600	0.42

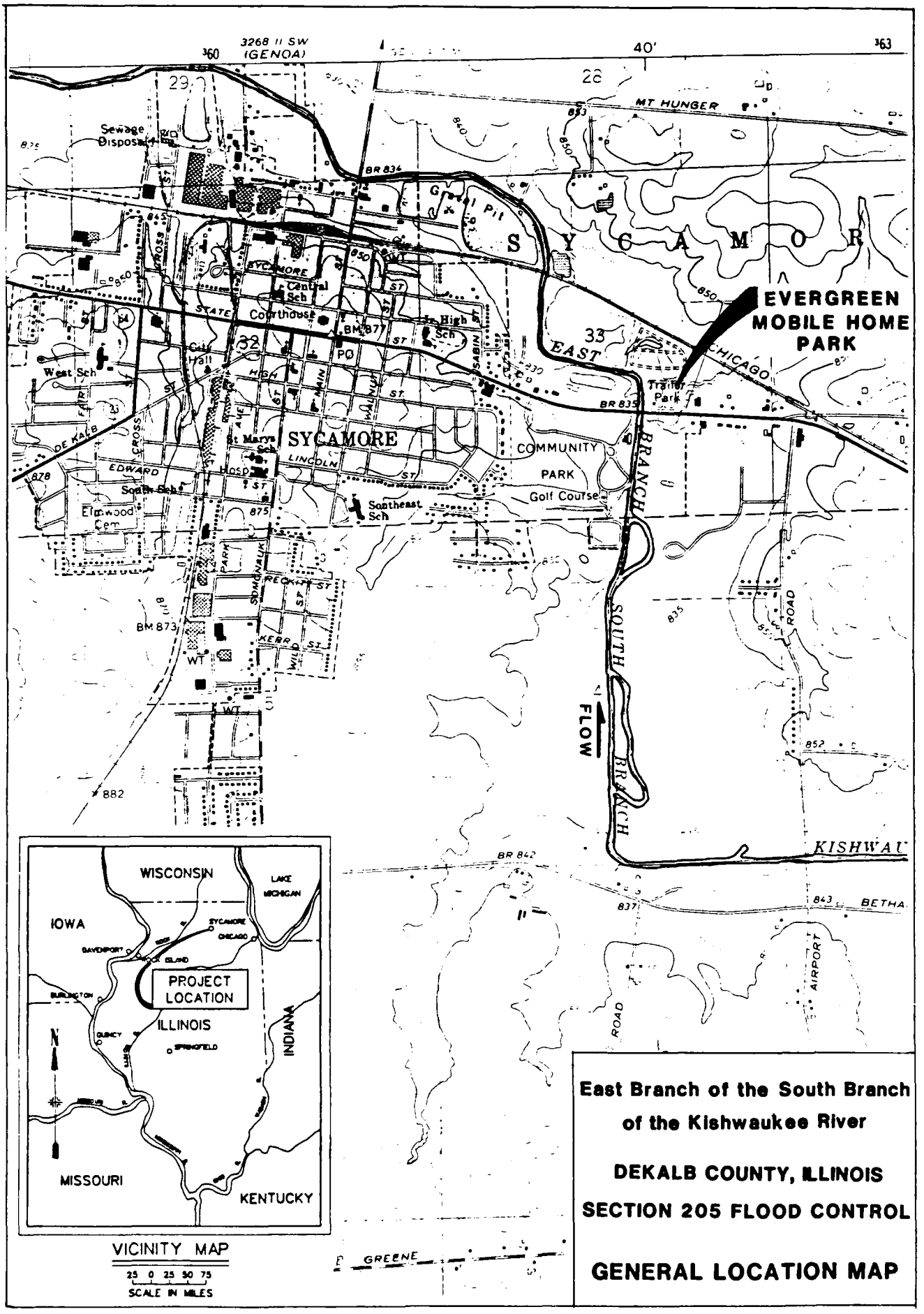
CONCLUSIONS

This study evaluated permanent evacuation of a mobile home park near Sycamore, Illinois. All plans evaluated were found to be economically infeasible. Structural flood damage reduction plans are not considered appropriate from two policy aspects. One policy issue is that the park is located adjacent to the river and structural protection would have to be constructed in the floodway. This would not meet State of Illinois regulatory criteria. The other policy issue is that the park is considered to be a single beneficiary for structural protection, and Federal policy does not permit protection of single beneficiaries.

SECTION 3 - RECOMMENDATION

Based on the findings of this reconnaissance report, I recommend that the Section 205 study of flood damage reduction measures for the Evergreen Village Mobile Home Park in De Kalb County, Illinois, be terminated.

Dudley M. Hanson, P.E.
Chief, Planning Division


3268 II SW
(GENOA)
MT HUNGER
Sewage Disposal
BR 834
SYCAMORE
Central Sch
STATE
Courthouse
High Sch
City Hall
West Sch
PO
EVERGREEN MOBILE HOME PARK
EAST
CHICAGO
Trailer Park
BR 835
SYCAMORE
COMMUNITY PARK
Golf Course
St Mary's Sch
Hosp
South Sch
Elmwood Cem
Southeast Sch
DE KALB
EDWARD
LINCOLN
HIGH
MAIN
WALNUT
PARK
SOMONAUK
REGAN
KERR
WILD
BM 873
WT
882
SOUTH BRANCH
FLOW
ROAD
AIRPORT
KISHWAU
BR 842
BETHA
GREENE
WISCONSIN
LAKE MICHIGAN
IOWA
DAVENPORT
ROCK ISLAND
BURLINGTON
QUINCY
SPRINGFIELD
PROJECT LOCATION
ILLINOIS
INDIANA
MISSOURI
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VICINITY MAP
25 0 25 50 75
SCALE IN MILES
East Branch of the South Branch of the Kishwaukee River
DEKALB COUNTY, ILLINOIS
SECTION 205 FLOOD CONTROL
GENERAL LOCATION MAP

PLATE 1

HYDROLOGY AND HYDRAULICS

APPENDIX A

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APPENDIX A
HYDROLOGY AND HYDRAULICS

GENERAL

This appendix discusses the procedures and results of hydrologic investigations associated with the analysis of flooding problems at the project site in DeKalb County, Illinois.

The project site is immediately downstream of Illinois Highway 64 on the right bank of the East Branch of the South Branch of the Kishwaukee River (east of the city of Sycamore, Illinois) in DeKalb County. The East Branch flows northwesterly to its confluence with the South Branch of the Kishwaukee River. The drainage area of the East Branch at its mouth is 126 square miles and at the project site its drainage area is 111 square miles. The watershed-vicinity map is shown on plate A-1.

CLIMATOLOGY

The area's climate is characterized by cold winters and warm, humid summers. The average precipitation is 35.6 inches, and average snowfall is 31 inches. The prevailing winds are west-northwest from November through May and south-southwest from June through October. The average daily temperature is 54 degrees F., with the maximum recorded being 110 degrees F. Temperatures of 10 to 15 degrees below zero do occur during winter months. Normal monthly precipitation is shown on table A-1.

TABLE A-1

Precipitation (Inches)
at DeKalb, Illinois

Month	Normal
January	1.66
February	1.28
March	2.52
April	3.65
May	3.52
June	4.55
July	4.62
August	3.69
September	3.54
October	2.86
November	2.40
December	2.00

FLOW-FREQUENCY RELATIONSHIPS

EAST BRANCH OF THE SOUTH BRANCH OF THE KISHWAUKEE RIVER

The flow-frequency values for the East Branch were developed from a Rock River basin regional regression analysis prepared for this study. The analysis was composed of the nine U.S. Geological Survey (U.S.G.S.) gaging stations shown in table A-2. The regression analysis independent variables were drainage area and stream slope. The resulting regression equations are shown in table A-3. As expected, these equations have improved upon the standard error of estimate and equivalent years of record statistics of the Illinois Regression Equations (U.S.G.S. WRI 77-117) as shown in table A-4. The flow-frequency values derived from these regional regression equations are shown in table A-5. These Rock River basin regional equations should only be used for streams with drainage areas between 80 and 1,000 square miles (the range of the drainage areas shown in table A-2).

TRIBUTARY A (Tributary to the East Branch of the South Branch of the Kishwaukee River)

Tributary A flows southerly to its confluence with the East Branch of the South Branch of the Kishwaukee River. The frequency analysis for Tributary A is shown in table A-6. The regression equations shown are per U.S.G.S. WRI 77-117.

TABLE A-2

Rock River Regional Flow-Frequency Study

Station	Location	Drainage Area	Record Years	Slope Ft/Mi	Skew	Mean	Standard Deviation
543150	Turtle Cr./Clinton	202	42	5.58	-.2	3.30	.369
543825	Coon Cr./Ripley	85	24	5.72	-.8	3.07	.334
543850	Kishwaukee/Belvider	538	46	4.59	-.3	3.55	.308
543950	Kishwaukee/Fairdale	387	46	2.27	-.9	3.56	.256
544000	Kishwaukee/Perryvl	1,099	46	4.07	-.6	3.83	.286
544050	Kilbuck Cr./Monroe	117	43	6.34	-.8	3.36	.300
544400	Elkhorn Cr./Penrose	146	47	4.28	-.6	3.46	.224
544550	Rock Cr./Morrison	164	32	3.91	-.2	3.33	.196
544700	Green River/Amboy	201	45	3.85	-.9	3.43	.241

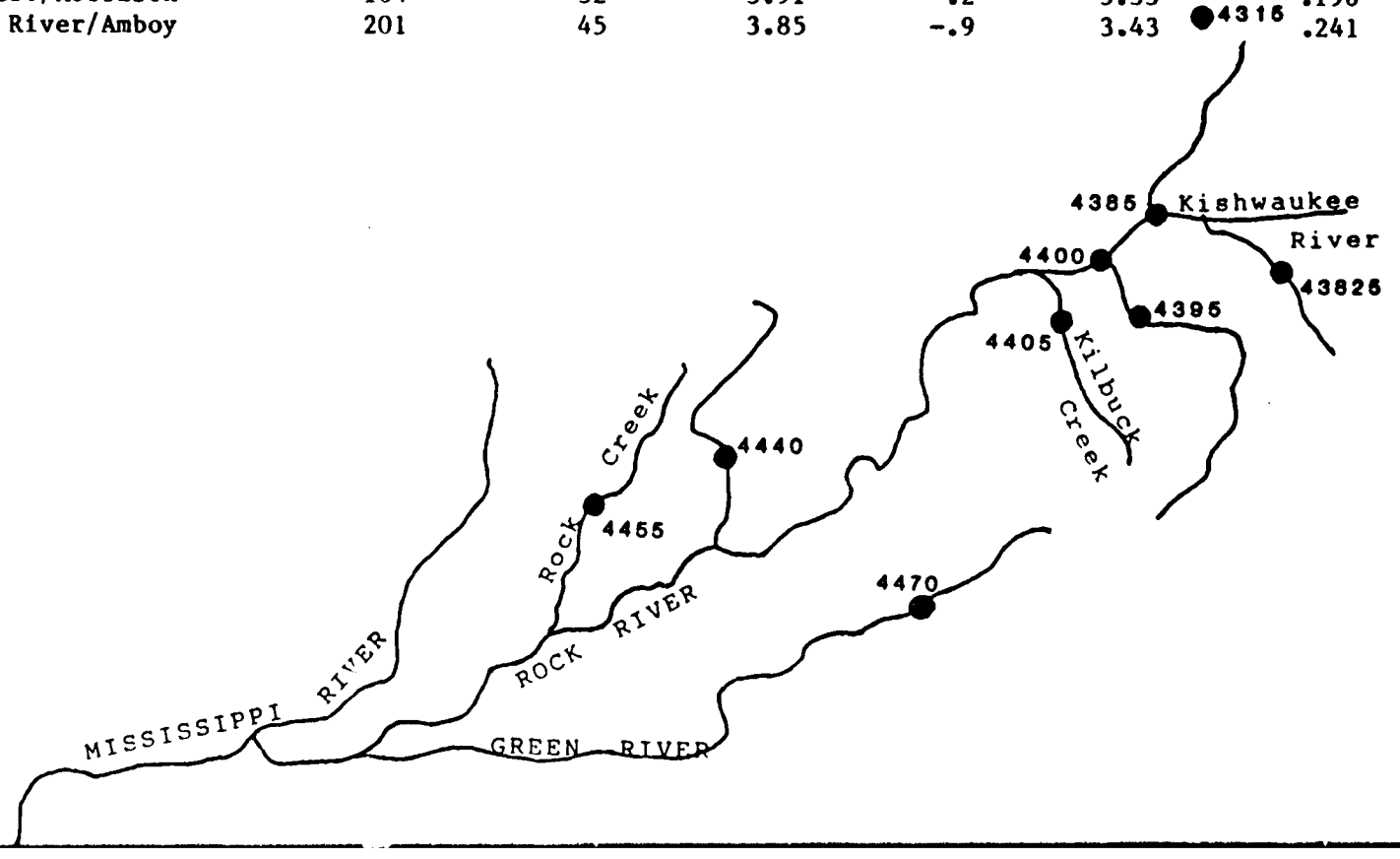


TABLE A-3

Rock River Regional Regression Analysis

$$Q_2 = (236.4)\ (A)^{.5072}/(S)^{.1816}$$

$$Q_{10} = (160.4)\ (A)^{.595}\ (S)^{.252}$$

$$Q_{50} = (104.3)\ (A)^{.6624}\ (S)^{.5395}$$

$$Q_{100} = (87.5)\ (A)^{.6874}\ (S)^{.6455}$$

$$Q_{500} = (57.7)\ (A)^{.744}\ (S)^{.8658}$$

TABLE A-4

Accuracy of Estimating Equations
(U.S.G.S. WRI 77-117)

Recurrence Interval, in Years	Standard Error of Estimate, in Percent	Equivalent Years of Record
2	34.5 (23.3)*	4 (3)
5	34.5	4
10	36.2 (16.0)	5 (9)
25	38.8	6
50	40.9 (16.0)	6 (17)
100	42.8 (19.0)	7 (17)
500	46.9 (25.0)	7

* Parentheses indicate Rock River Regional Regression Study, accuracy of estimating equations.

TABLE A-5

Discharge Summary
East Branch of the South Branch of the Kishwaukee River

Location	Drainage Area	Slope	Flow-Frequency Values in ft^3/s				
			2-Year	10-year	50-year	100-year	500-year
At mouth	126 sq.mi.	5 ft/mi	2,050	4,280	6,120	6,870	8,490
At site	111 sq.mi.	5.5 ft/mi	1,900	4,060	5,920	6,700	8,390

TABLE A-6

Frequency Analysis, Tributary A

Drainage Area Computations (A)

$$15.71\ in^2 - 0.00\ in^2 = 15.71\ in^2$$
$$31.44\ in^2 - 15.71\ in^2 = \underline{15.73}\ in^2$$
$$\text{Avg } 15.72\ in^2$$

$$15.72\ in^2 \times 0.144\ \frac{mi^2}{in^2} = 2.26\ mi^2$$

Channel Length (L)

L = 19,500' = 3.69 mi

Elevation at

10% - 837.0' NGVD*
85% - 895.0' NGVD
58.0' NGVD

Slope (S)

$$\frac{58'}{3.69\ mi} = 15.72\ \frac{ft}{mi}$$

Rainfall Intensity (I)

I @ 88x37'30" Long. = 2.8"
42x00'00" Lat.

Areal Factor (AF)

AF = 1.11

$Q_2 = 42.7\ A^{0.776}\ S^{0.466}\ (I-2.5)^{.834}\ AF = 118\ ft^3/s$

$Q_5 = 71.1\ A^{0.769}\ S^{0.485}\ (I-2.5)^{.833}\ AF = 206\ ft^3/s$

$Q_{10} = 90.8\ A^{0.767}\ S^{0.494}\ (I-2.5)^{.833}\ AF = 269\ ft^3/s$

$Q_{25} = 115\ A^{0.764}\ S^{0.504}\ (I-2.5)^{.834}\ AF = 349\ ft^3/s$

$Q_{50} = 134\ A^{0.763}\ S^{0.510}\ (I-2.5)^{.836}\ AF = 412\ ft^3/s$

$Q_{100} = 152\ A^{0.762}\ S^{0.515}\ (I-2.5)^{.836}\ AF = 474\ ft^3/s$

$Q_{500} = 191\ A^{0.761}\ S^{0.528}\ (I-2.5)^{.837}\ AF = 616\ ft^3/s$

* National Geodetic Vertical Datum of 1929

WATER SURFACE PROFILES

EAST BRANCH OF THE SOUTH BRANCH OF THE KISHWAUKEE RIVER

Water surface profiles were developed for the East Branch using the HEC-2 water surface profile computer model. The cross-sectional data were obtained from the June 1971 floodplain information report for DeKalb County. The 2-, 10-, 50-, 100- and 500-year water surface profiles are shown on plate A-2.

TRIBUTARY A

Tributary A water surface elevations were developed from 1987 cross-sectional data and normal depth computations. The rating curve for Tributary A adjacent to the project site is shown on plate A-3.

REFERENCES

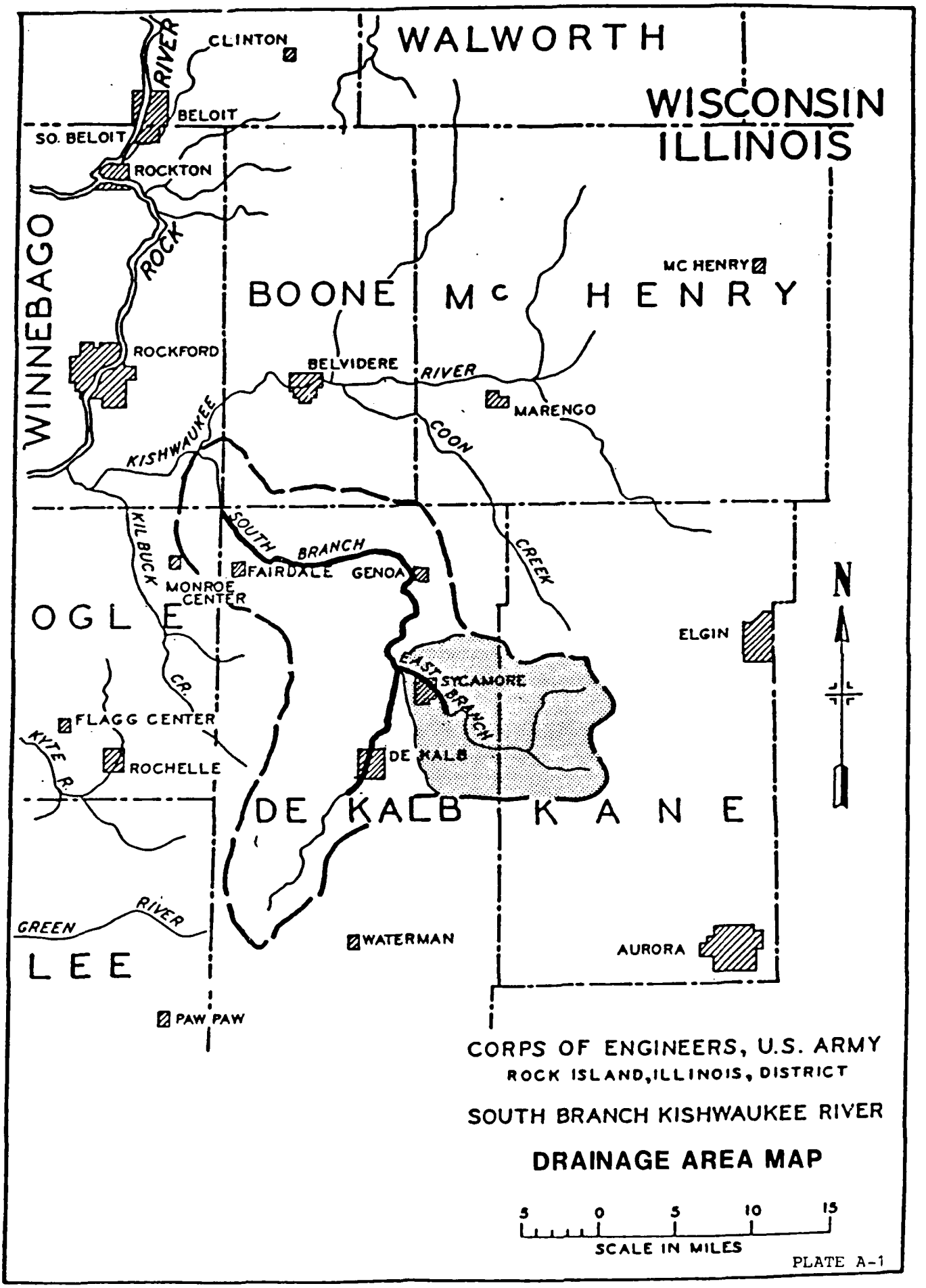
1. Federal Insurance Administration, Flood Insurance Study, City of Sycamore, Illinois, 1983.

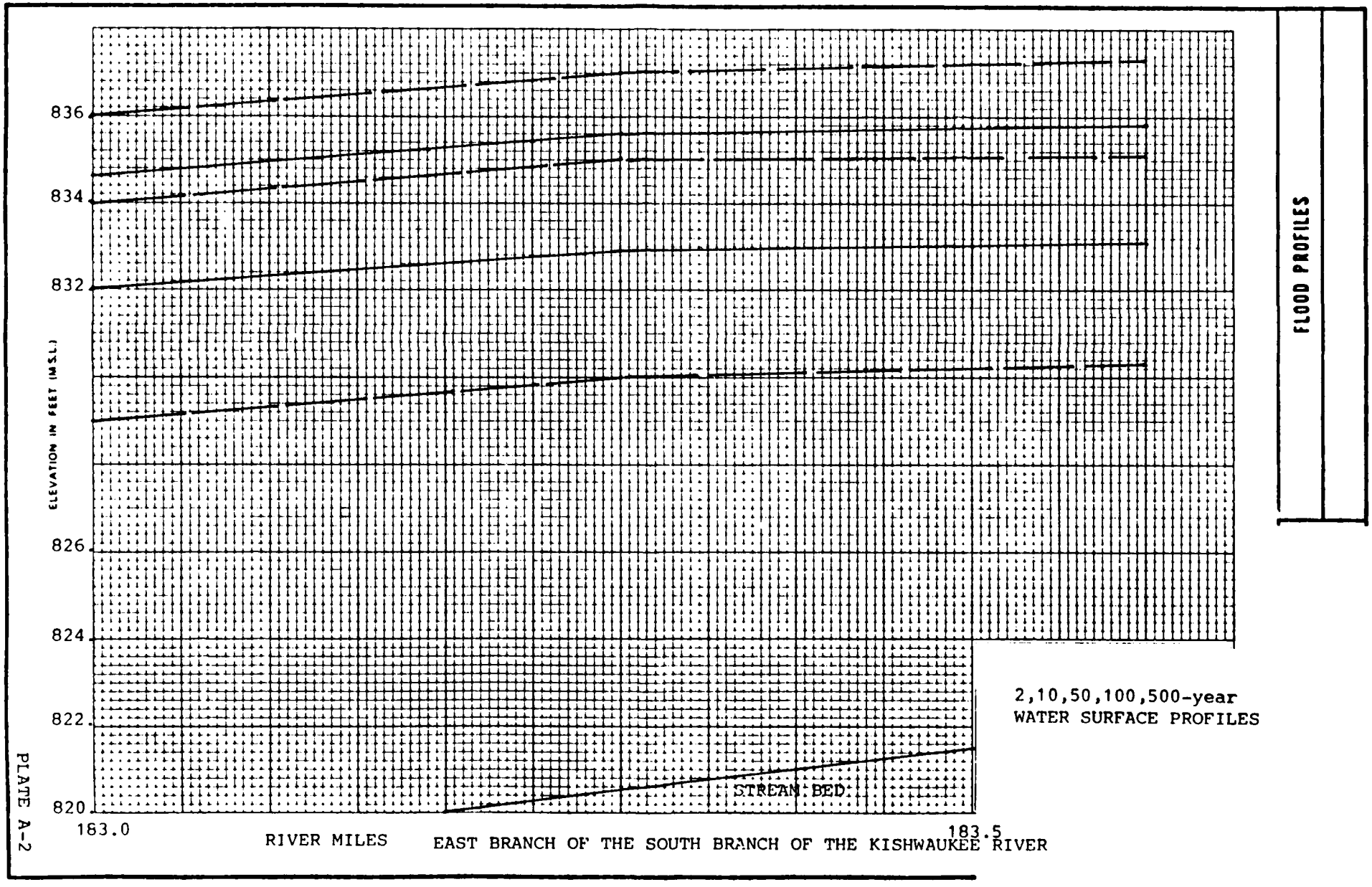
2. U.S. Army Corps of Engineers, Hydrologic Engineering Center, HEC-2 Water Surface Profiles, Modification 55, March 1982.

3. U.S. Army Corps of Engineers, Rock Island District, Floodplain Information Report, South Branch Kishwaukee River, DeKalb County, June 1971.

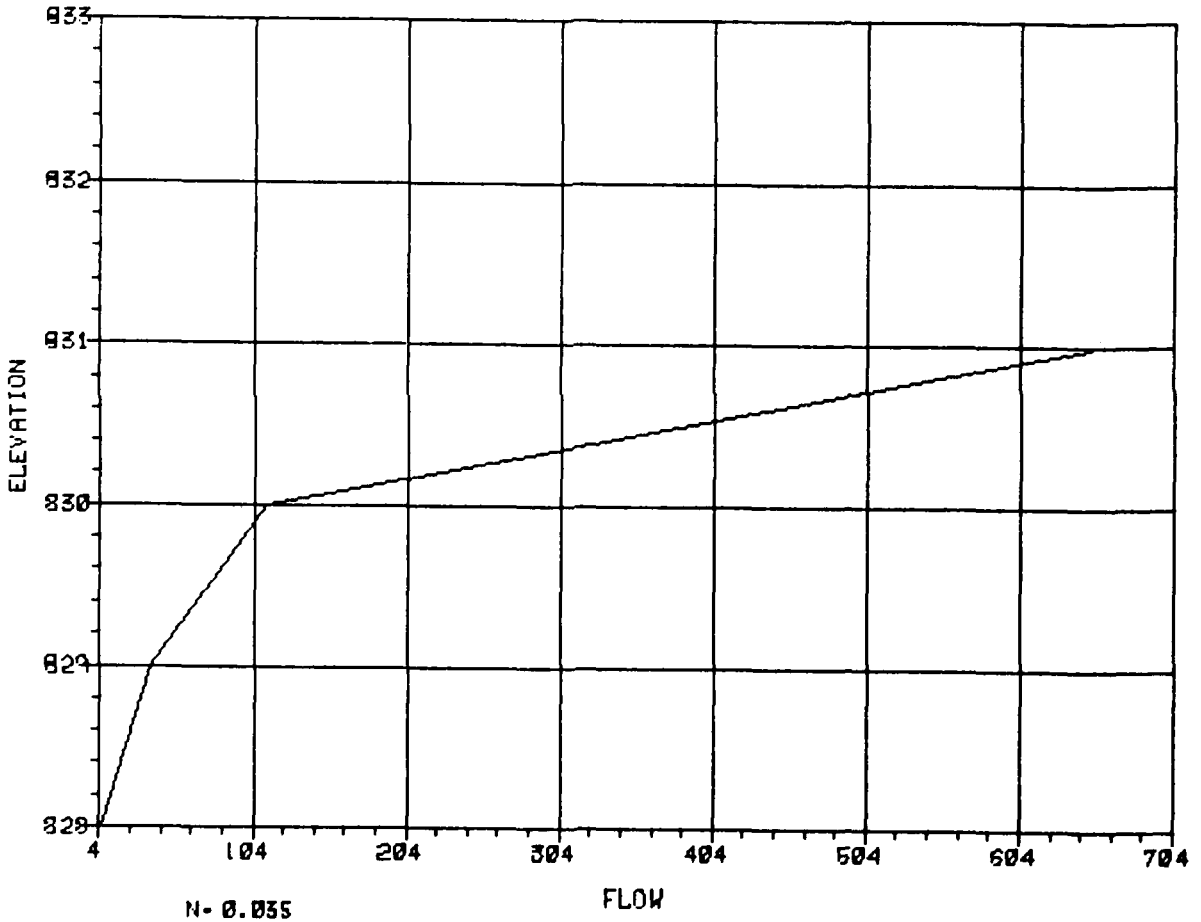
4. U.S. Army Corps of Engineers, Rock Island District, Reconnaissance Report for Section 205 Flood Control Project, South Branch Kishwaukee River Near Sycamore, DeKalb County, Illinois, 1979.

5. U.S. Geological Survey, Technique for Estimating Magnitude and Frequency of Floods in Illinois, U.S.G.S. Water-Resources Investigations 77-117, 1977.


WALWORTH
WISCONSIN
ILLINOIS
CLINTON
RIVER
BELOIT
SO. BELOIT
ROCKTON
ROCK
WINNEBAGO
BOONE
Mc HENRY
MC HENRY
ROCKFORD
BELVIDERE
RIVER
MARENGO
KISHWAUKEE
COON
KIL BUCK
SOUTH BRANCH
CREEK
MONROE CENTER
FAIRDALE
GENOA
OGLE
ELGIN
EAST BRANCH
SYCAMORE
CR.
FLAGG CENTER
KYTE R.
ROCHELLE
DE KALB
DE KALB
KANE
GREEN RIVER
WATERMAN
AURORA
LEE
PAW PAW
N
CORPS OF ENGINEERS, U.S. ARMY
ROCK ISLAND, ILLINOIS, DISTRICT
SOUTH BRANCH KISHWAUKEE RIVER
DRAINAGE AREA MAP
5 0 5 10 15
SCALE IN MILES
PLATE A-1


FLOOD PROFILES
836
834
832
826
824
822
820
ELEVATION IN FEET (MSL)
2,10,50,100,500-year
WATER SURFACE PROFILES
STREAM BED
163.0
183.5
RIVER MILES
EAST BRANCH OF THE SOUTH BRANCH OF THE KISHWAUKEE RIVER
PLATE A-2

TRIBUTARY A - RATING CURVE



N= 0.035

SLOPE= 0.0030

PLATE A-3

APPENDIX B

ECONOMIC ANALYSIS

RECONNAISSANCE REPORT
FOR
SECTION 205 FLOOD CONTROL
EAST BRANCH OF THE SOUTH BRANCH OF THE KISHWAUKEE RIVER
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APPENDIX B
ECONOMIC ANALYSIS

INTRODUCTION

The following economic analysis examines the feasibility of relocating a residential area in De Kalb County (near Sycamore) as a nonstructural solution to the flood problem. Benefits are determined by computing the reduction in externalized flood damage realized when the manufactured homes are evacuated from the floodplain.

THE PROBLEM

The problem is caused by the flooding of the East Branch of the South Branch of the Kishwaukee River and also by a small tributary to the East Branch (see plate 1 of the main report).

The problem consists of 153 units of manufactured housing currently occupying the site.

THE NATURE OF THE FLOODING

Flooding of the river and the tributary is relatively flashy in nature, with crests rising and subsiding in 6 to 12 hours. A comparison of drainage basin size and estimated times of flooding, as affected by rainfall patterns, indicates coincident flooding to be a low probability. Therefore, for the purpose of economic analysis, flooding of each stream is considered to be an independent event.

The floods that occurred in March 1979 and July 1983 appear to be of similar size and are the only damaging floods of record during the past 10 years. The 1979 flood very likely caused the greater damage because snow-melt was involved which increased the duration of flooding.

These floods resemble a 25- to 50-year flood in size. According to observers, each flood filled the U.S. Highway 64 bridge span to its lower members but did not overflow the deck. The bridge span was designed to pass the 50-year flood. The floodwaters of the 1983 flood were reported to

have overtopped the riverbank and parts of Highway 64, filling the streets of the area to a level 1 to 6 inches above the floors of the homes and causing widespread evacuation of area occupants.

Emergency organizations, such as the Red Cross, provided temporary shelter for persons forced out of their houses. Electrical power was lost for approximately 4 days. However, many occupants did not return after 4 days because of the extensive repairs needed. The area sustained about $12,000 damage to streets and facilities during the flood.

About 81 manufactured homes are served by a sewer system which connects facilities to a package sewage treatment plant. Minimal damage was experienced by the sewer system and the plant. Homes not connected to the sewer system are connected to septic tanks. Septic tanks were not structurally damaged by the flood but were temporarily out of operation because of the pressure of floodwaters.

Minimal damage occurred to the water supply system. The source of the water is from an underground aquifer. Water is collected through sealed wells that effectively prevented damage to the wells and their contents. Two water storage tanks were damaged when they surfaced because of the rise of underground water pressure caused by the flood.

THE 1981 REPORT

In the October 1981 Section 205 Reconnaissance Report, the Rock Island District studied a number of plans for reducing flood damage to the area. The nonstructural method, involving relocating all manufactured homes out of the floodplain, was found to be most feasible of the methods studied. Other methods were: (1) earthen levee and/or floodwall, (2) filling the land and raising structures, (3) floodproofing, (4) using a dam and reservoir, and (5) widening the river.

CHANGES SINCE THE 1981 REPORT

Changes since the 1981 report appeared to require additional study and updating of data: (1) Older units have been replaced by new; (2) additional lots have been added; (3) there are now 153 units instead of the 123 units reported in the 1981 report; (4) new model regulations have been released by the Department of the Army to improve administration and implementation of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646); and (5) new elevation-frequency curves have been provided by the Rock Island District Hydraulics Branch.

THE CURRENT STUDY

The current study will carry forward certain information of the 1981 study, add new information, and update usable data.

A typical nonstructural plan would make three options available to home owners who would be displaced from floodplain areas and relocated to flood-free locations: (1) relocating the family into adequate existing housing of nearby areas; (2) moving the home to a new flood-free home site; and (3) moving the family into housing newly constructed as a "last resort." This is when housing which meets the criteria of Public Law 91-646 is not otherwise available.

Option 3 will not be used by this study because family relocation requirements can be satisfied by the first two options.

ECONOMIC ANALYSIS

The economic analysis is made in accordance with the Principles and Guidelines, and it provides the basis for most nonstructural plans involving relocating and/or evacuating families out of the floodplain.

As mentioned previously, 153 manufactured homes are currently in the floodplain, an increase from the 123 existing in 1980. Thirty spaces are also available for travel trailers that use the park during the summer tourist season. It was indicated that the travel trailer spaces are 40 to 60 percent occupied during the April-June flood season.

PLAN REFORMULATION

Two nonstructural plans were reformulated to: (1) relocate 153 manufactured homes to other flood-free areas; and (2) move 153 families to adequate existing housing of nearby areas.

DATA COLLECTION

Damage curves for the homes were derived from the following field data collected: the size, quality, age, and the elevations of floor levels of each unit. Value per square foot of floor space and depreciation according to age were based upon tables supplied by the "Marshall Valuations Service," (publication). Floor, ground, and street elevations were measured. Residential data were organized in a form adopted to computer input; namely, value, type of structure, and ground and floor elevations. The computer program calculates damage for structure and contents for one-half foot increments. Elevation-damage curves are combined with the elevation-frequency curves to provide damage-frequency information needed to compute average annual damage.

Table B-1 gives the damage-frequency relationships for the houses.

TABLE B-1

Damage Versus Frequency
East Branch of the South Branch of the Kishwaukee River
and Its Tributary

Elevation	Frequency of Kishwaukee (per year)	Frequency of Tributary (per year)	Damage Curve for Kishwaukee Floods: Residential Structure ($1,000's)	Residential Contents ($1,000's)	Emergency Costs ($1,000's)	Damage Curve for Tributary Floods: Residential Structure ($1,000's)	Residential Contents ($1,000's)	Emergency Costs ($1,000's)
828	64	-	4.0					
83	43	5x	15.1			15.1		
831	32	.1	37.7	3.4	1.4	37.7	3.4	-
832	16	0	55.8	46.8	9.1	60.3	16.1	-
833	9	0	217.5	176.9	22.9	60.3	16.1	-
834	4.5	0	431.9	343.0	45.3	60.3	16.1	-
835	1.9	0	725.4	456.9	49.3	60.3	16.1	-
836	0.7	0	1020.7	517.1	49.3	60.3	16.1	-
837	0.2	0	1271.9	536.9	49.3	60.3	16.1	-
838	0	0	1576.2	539.4	49.3	60.3	16.1	-

Average annual damages (AAD) are computed by integrating the damage curves with the frequency curves. Table B-2 gives inundation AAD for the study area.

TABLE B-2

Summary of Average Annual Damages($)

8-5/8% Interest Rate
February 1988 Price Levels

Kishwaukee River Floods

Category	Existing	Base Year	Future	Total
Residential				
Structure	74,900	74,900	--	74,900
Content	43,600	46,900	12,900	59,800
Emergency Costs	6,200	6,200	--	6,200
Total	124,700	128,000	12,900	140,900

Tributary Floods

	Existing	Base Year	Future	Total
Residential				
Structure	11,200	11,200	--	11,200
Content	--	--	--	--
Emergency Costs	--	--	--	--
Total	11,200	11,200	--	11,200

Total

	Existing	Base Year	Future	Total
Residential				
Structure	86,100	86,100	--	86,100
Content	43,600	46,900	12,900	59,800
Emergency Costs	6,200	6,200	--	6,200
Total	135,900	139,200	12,900	152,100

EXTERNALIZED FLOOD DAMAGE

Benefits for the plan account for a value created for which a willingness to pay is generated, such as emergency costs, clean up costs, and those flood damages borne by the public through the National Flood Insurance Program. These are known as externalized flood damages. The plan reduces the externalized cost of floodplain occupancy. The internalized costs are reflected in the lower maket values in high risk areas. In the nonstructural plan outlined herein, the Government acquires the floodplain at a value that was influenced by the flood hazard. This lower project cost represents a benefit due to internalized flood damages that reflects the flood hazard. When the market value is further reduced past that attributable to reductions in flood damages, a further benefit is created. The total benefit is the value created by reducing the public cost of flood- plain occupancy, or the elimination of externalized flood damages. This further reduction is difficult to document and is not evident in De - Kalb County.

The externalized flood damage is the same as the insurance subsidy and is calculated as follows: [Annual Damage without the plan ($145,900)] - [Annual Insurance Premium ($22,200) + Annual Expected Deductible ($27,600) + Annual Uninsurable Damages ($0)] = $96,100. Noninsurable losses are expected to be minimal. Annual insurance policies are $145 per policy. Annual deductible amount was calculated based on the number of affected structures and damage at each elevation and flood insurance deductible amount of $500 for content and $500 for structural damage.

EMERGENCY CLEANUP COSTS AVOIDED

These are the emergency and cleanup costs that are eliminated when activities are removed from the floodplain. Emergency and cleanup costs are actually additional flood damages that are separate from the flood insurance type for the purposes of clarity.

Cleanup costs of $11,000 and emergency costs of $38,300 were estimated for the 1983 flood, for a total of $49,300. Total cleanup and emergency costs varied with flood size. This variation was assumed to be in proportion to the number of units experiencing floodwater higher than floor levels. Using this assumption of damage and the elevation-frequency curves derived for river and tributary flooding, the average annual damages for emergency and cleanup were computed to be $6,200, as shown in table 2.

FLOOD-FREE VALUE

This is the flood-free market value of the relocated homes on their new lots out of the floodplain. In a plan which physically relocates existing floodplain structures to flood-free sites, it is appropriate to claim the market value of the relocation sites and relocated structures to be a

benefit or offset to the cost of acquisition. This value was calculated as the cost of acquisition of the manufactured homes at the old site, plus the cost of acquiring and developing a new site, as shown in table B-3.

NATIONAL FLOOD INSURANCE COST SAVINGS

The national cost of the flood insurance program is its administration. Savings of flood insurance operating costs can be credited to the National Economic Development (NED) benefit account when a project eliminated inundation of an area due a to flood having an exceedence frequency of 1 percent or less. It is assumed that, without a Federal project, all 153 structures which would experience significant flood damage will voluntarily come into the flood insurance program. Using $85 as the insurance program's operating cost per policy, the resulting flood insurance overhead costs (savings) are $13,000 (153 structures x $85).

NEW USE OF THE FLOODPLAIN

A benefit is derived from the use of the evacuated floodplain after its conversion. Agricultural use appeared to be the best use of this land. Land acquisition is one of the costs of conversion. Therefore, the benefit is the annualized fair market value of agricultural land. The value of agricultural land in a State of Illinois floodplain was estimated at $3,000 per acre in 1981. Doane Agricultural Service of St. Louis, Missouri, estimated that the average price of agricultural land in Illinois has declined 52 percent since 1981. A 52 percent decline from $3,000 per acre would place the 1986 price at $1,440 per acre. The area of the land to be acquired is approximately 24 acres, giving a land value after relocation of $34,560. The benefit is the annual value or $3,000 ($34,560 x 0.08627).

BENEFITS AND COSTS

The benefits versus costs of (1) relocating all 153 manufactured homes to a flood-free site, and (2) moving all 153 families to adequate existing housing of nearby areas is summarized in tables B-3 and B-4, respectively. Table B-5 summarizes the benefit-to-cost ratios for the evacuation plans analyzed. As shown, neither plan is economically justified.

TABLE B-3

De Kalb County, Illinois
NED Benefits and Costs
Permanent Evacuation Plan
Relocate All Structures to Flood-Free Sites

NED Costs

a. Acquistion of lands and structures in floodplain at fair market value	$2,975,600
b. Preparation of relocation sites	909,000
c. Transfer of structures to relocation sites	212,200
d. Conversion of vacated floodplain lands to new use	161,400
Contingencies (25%) on b, c, and d above	320,800
Engineering and design (12%) on b, c, and d above	192,000
Supervision and adminstration (15%) on b, c, and d above	240,000
Subtotal	$5,011,000
Interest During Construction	128,300
Total	$5,139,300

Annual Costs

Interest and Amortization of First Costs	$443,400

NED Benefits

Reduction of externalized flood damages	
Reduction of insurable flood damages	96,100
Reduction of emergency costs	6,200
National flood insurance cost savings	13,000
Benefits from floodplain's new use	3,000
Annualized market value of relocation sites with structures	298,700
Total	$417,000

TABLE B-4

De Kalb County, Illinois
NED Benefits and Costs
Plan Which Evacuates Current Uses From the Floodplain
But Does Not Physically Relocate Structures to Flood-Free Sites

NED Costs

First Costs

a. Acquisition of Lands and Structures in Floodplain at Fair Market Value	$2,975,600
b. Removal of Structures from the Floodplain (Net of Salvage Value)	(-459,000)
c. Conversion of Vacated Lands to New Use	161,400
Contingencies (25%)	40,400
Engineering and Design (12%)	24,300
Supervision and Administration (15%)	30,300
Subtotal	3,232,000
Interest During Construction	128,300
Total	$3,360,300

Annual Costs

Interest and Amortization on First Cost	$289,900

NED Benefits

Reduction in Externalized Flood Damages	
Reduction in Insurable Flood Damages	96,100
Reduction in Emergency Costs	6,200
National Flood Insurance Cost Savings	13,000
Benefits From Floodplain's New Use	3,000
Total	$118,300

TABLE B-5

Summary of Average Annual Benefits and Costs
8-5/8 Percent Interest Rate
March 1988 Price Levels

	Average Annual Benefits($)	Average Annual Costs($)	B/C Ratios	Net Benefits
A. Permanent Evacuation--Relocate Structures to Flood-Free Sites	390,600	443,400	0.88	-
B. Permanent Evacuation -- Does Not Relocate Structures to Flood-Free Sites	118,300	278,800	0.42	-

PERTINENT CORRESPONDENCE

APPENDIX C

RECONNAISSANCE REPORT
FOR
SECTION 205 FLOOD CONTROL

EAST BRANCH OF THE SOUTH BRANCH OF THE KISHWAUKEE RIVER
DE KALB COUNTY, ILLINOIS

APPENDIX C
PERTINENT CORRESPONDENCE

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Correspondence

DeKalb County

June 29, 1979

County Board

Colonel F. W. Mueller, Jr.
District Engineer
U. S. Army Engineer District
Rock Island/Clock Tower Building
Rock Island, Illinois 61201

Re: Proposed Local Flood Protection Project
Evergreen Village Mobile Home Park

Dear Colonel Muller:

This letter is to request the assistance of the United States Army Corps of Engineers under Section 205 of the 1948 Flood Control Act in providing flood protection to the County of DeKalb.

A serious flood problem is present at the property commonly known as the Evergreen Village Mobile Home Park located on State Route #64 immediately east of the city limits of Sycamore, Illinois. For your further information I am enclosing herewith copies of a legal description, plat of survey and floodplain map pertinent to this property, as well as a copy of a letter from the DeKalb County Civil Defense Director summarizing recent flooding problems experienced thereat.

Members of your staff inspected the site on Tuesday, June 26th. Also on that date they reviewed the scope of the problem with the County Civil Defense Director, the County Planning Director and myself.

Appreciative of your consideration of this request, and hopeful that the Corps of Engineers will be able to work with the DeKalb County Government in alleviating this serious flooding problem, I am

Cordially,

James B. Whitford, Jr.
Administrator

JBW:lk

C-1

United States Department of the Interior

FISH AND WILDLIFE SERVICE

IN REPLY REFER TO:

ROCK ISLAND FIELD OFFICE (ES)
1830 SECOND AVENUE
ROCK ISLAND, ILLINOIS 61201

Com: 309-793-5800
FTS: 386-5800

January 2, 1981

Colonel Frederick W. Mueller
District Engineer
U.S. Army Engineer District
Rock Island
Clock Tower Building
Rock Island, Illinois 61201

Dear Colonel Mueller:

On October 14, 1980, we met with members of your staff at the project site of the Section 205 Flood Control Reconnaissance Study for the South Branch Kishwaukee River near Sycamore, Illinois, in DeKalb County. This letter provides our planning aid comments on the relocation alternatives proposed at the site inspection and other proposed flood control measures.

Twelve alternatives for flood control are being studied. Of these, flood insurance, floodproofing and no action require no additional land use and would not impact on fish and wildlife resources. The earth levee, floodwall, filling the trailer park, tributary channel improvements and widening the Kishwaukee River may all adversely affect fish and wildlife resources.

Tributary channel improvements and widening the Kishwaukee River are the least desirable alternatives. These involve the removal and degradation of aquatic habitat and biota. Studies have shown channelized sections of streams to be less productive than non-channelized sections. The U.S. Fish and Wildlife Service generally opposes stream channelization.

Two areas of impact may result from construction of the earth levee, floodwall and filling the trailer park. First, the flood waters would be confined to a smaller area and may increase in velocity and scour the stream. Downstream flooding may also increase, thus transferring the problem elsewhere. Secondly, in protecting the trailer park from the stream overtopping its banks, valuable streamside vegetation may be lost. Streamside vegetation is a vital link in the aquatic food web. It provides a major source of organic material and cools the stream through shading.

The remaining alternatives of zoning, relocation, non-structural combination and dam and reservoir may be beneficial or detrimental to the natural resources of the project area. In relocating the trailer park, if the old site is enhanced to a habitat value greater than that of the new site, a net gain in habitat value would occur. Conversely, if the trailer park was relocated and the old site was used for parking or some other type of development, a net habitat loss would result, valued at the loss of the new site plus any further degradation to the existing habitat near the old trailer park.

During the October 14, 1980 site inspection with members of your staff, seven possible areas for relocation of the trailer park were viewed (see attached photos). All the proposed sites are agricultural or old field lands. Relocating the trailer park to one of the seven sites would reduce any food and shelter benefits the field might offer birds and small furbearers. However, impacts resulting from relocation of the trailer park to one of these seven areas are not expected to be significant.

The dam and reservoir alternative may provide an excellent opportunity to enhance fish and wildlife resources and recreation. For a seasonal reservoir, the area could be managed for park, recreation and wildlife feeding habitat. Ground-nesting habitat should be discouraged. A year-round reservoir would provide fisheries benefits as well as an increase in the recreational value of the area. However, fish and wildlife resources could realize a net loss if the dam and reservoir alternative significantly affected valuable wetland, riparian or stream habitat.

In summary, we favor 1) the dam and reservoir alternative if wetland, riparian or stream habitat is not significantly affected, 2) the no impact alternatives (flood insurance, floodproofing and no action) or 3) relocation (zoning, relocation, nonstructural combination) if it does not result in further degradation of fish and wildlife habitat at the present trailer park site.

We do not encourage the earth levee, floodwall, filling the trailer park or tributary channel improvements. The U.S. Fish and Wildlife Service would oppose widening the Kishwaukee River.

These comments provide technical assistance only and do not constitute the report of the Secretary of Interior on the project within the meaning of Section 2(b) of the Fish and Wildlife Coordination Act, do not fulfill the requirements under Section 7 of the Endangered Species Act, nor do they represent the review comments of the U.S. Department of the Interior on any forthcoming environmental statement.

Sincerely yours,

Thomas M. Groutage
Field Supervisor

Attachments

cc: Illinois Department of Conservation (Bertrand & Schanzle)
Illinois Environmental Protection Agency
U.S. Environmental Protection Agency (Beno)
Ms. Sue Pfluger
DeKalb County Planning Department, Courthouse annex,
Sycamore, Illinois
U.S. Fish and Wildlife Service, North Kansas City, MO
U.S. Fish and Wildlife Service, St. Paul, MN (RA)

DeKalb County

County Board

April 6, 1981

Mr. Peter Raven
US Corps of Engineers
Rock Island District
Clock Tower Building
Rock Island, Illinois 61201

Re: Evergreen Village Mobile Home Park, DeKalb County, Illinois

Dear Mr. Raven:

As promised, I am enclosing herewith detailed information on snow and flooding declarations declared for DeKalb County for 1979.

As I am certain that you can well understand, one of the most significant flooding problems at that time in DeKalb County involved the captioned area.

Cordially,

Jim Whitford

James B. Whitford, Jr.
County Administrator

JBW/nw

Enclosure

Court House Sycamore, Illinois 60178

DeKalb County

County Board

June 6, 1981

Mr. Doyle W. McCully, P.E.
Chief, Engineering Division
Corps of Engineers
Rock Island District
Clock Tower Building
Rock Island, Illinois 61201

Re: Flood Control in DeKalb County on the Kishwaukee River near Sycamore, Illinois

Dear Mr. McCully:

I am writing relative to the captioned matter, as I assume you are desirous of having a prompt response and the County Board will not meet to officially consider your letter of June 1, until Monday, June 22.

First, let me say that we are very appreciative of the efforts of your staff in conducting the reconnaissance study of one of DeKalb County's principal flood problems, namely the Evergreen Village Mobile Home Park and environs. However, the fiscal commitment required of DeKalb County to effectuate the remedy recommended may exceed the County's meager resources. To frankly state my opinion, the cost of the remedy to DeKalb County is out of proportion to the gravity of the problem, at least as to the danger posed to the community or the inconvenience accruing to the county government.

Please understand that my comments are not intended as a reflection on your study or the adequacy of the solution recommended. There are merely concerns that must be raised locally when a significant expenditure is contemplated.

I will advise you of the official position of the County Board after June 22.

Cordially,

James B. Whitford, Jr.
County Administrator

JBW/nw

Court House Sycamore, Illinois 60178

DeKalb County

County Board

July 29, 1981

Mr. Doyle W. McCully, P.E.
Chief, Engineering Division
Corps of Engineers
Rock Island District
Clock Tower Building
Rock Island, Illinois 61201

Re: Flood Control in DeKalb County on the Kishwaukee River near Sycamore, Illinois

Dear Mr. McCully:

Reference is made to your correspondence of June 1, and my response thereto of June 6, pertinent to the captioned matter.

Please be advised that the DeKalb County Board has determined that the problem posed by flooding at the Evergreen Village Mobile Home Park is not of sufficient priority to warrant the expenditure of one-half million dollars or more of County monies, as required to effectuate the remedy recommended by your reconnaissance study. Such determination is in no way intended as an adverse reflection upon the adequacy of your study, or the viability of the solution proposed. Simply put, the service demands made on the County are many, and its financial resources are meager; and the danger presented by this flooding problem does not warrant so depleting those meager resources, considering other problems now confronting the County.

The DeKalb County Board is very appreciative of the efforts of your staff in conducting the reconnaissance study, and of your patience in awaiting this advice.

Cordially,

James B. Whitford, Jr.

JBW/nw

Court House Sycamore, Illinois 60178

Illinois Department of Transportation
Division of Water Resources
2300 South Dirksen Parkway/Springfield, Illinois/62764

July 31, 1984

Mr. Donald Lundeen
DeKalb County Board Chairman
110 East Sycamore Street
Sycamore, Illinois 60178

Dear Mr. Lundeen:

This letter is written to determine what interest there may be on the part of DeKalb County to become reinvolved in the possible solution to a recurring flood problem in unincorporated DeKalb County. The area being referred to is the Evergreen Village Mobile Home Park near Sycamore along the East Branch of the South Branch of the Kishwaukee River.

In June 1979 the DeKalb County Board requested the assistance of the Corps of Engineers under their Section 205 program to provide flood protection to the area. In October 1981 the Corps published a Reconnaissance Report which indicated that an economically feasible plan for the permanent evacuation/relocation of the mobile home park could be recommended for detailed study. The preliminary cost estimate for the project in 1981 was $2.7 million.

Under the Federal guidelines at the time of the study, the Federal share of the project cost was set at 80%, with the maximum Federal expenditure limited to $2,000,000. In this case the county, as the project's local sponsor, would have been responsible for the remaining $700,000.

In a July 1981 letter, James Whitford, Jr. advised the Corps of Engineers that DeKalb County did not have the financial capability to undertake the large monetary obligation that would be required as local sponsor for the project.

Since 1981, the Corps' Section 205 program has undergone some changes, one being that the upper limit for Federal participation has been raised from $2 million to $4 million. Under these new rules the

local sponsor's share for a $2.7 million project would be 20% of the total, or $540,000, which is somewhat less than the $700,000 proposed in the 1981 report.

Realizing that $540,000 may still be beyond the means of the County, the potential does exist for a cooperative agreement between the County and the Division of Water Resources (DWR) to cost share in the local sponsor responsibilities. While exact cost sharing amounts would need to be negotiated, we believe that the County's actual share of the project cost can be reduced considerably.

It should be noted that no County funds would probably be needed for several years. It will take that long for detailed studies and planning to be completed before any construction could be started.

If DeKalb County would like to pursue the reactivation of the Corps study with the possibility of cost sharing with DWR, it would be necessary for the County to make a written request to the Corps to proceed to the next phase of their study process. An indication would also need to be made that conditions have changed since 1981 and that the County would intend to be the local sponsor for the project. While this would not be a binding committment on the County's part, the Corps needs to know that a potential local sponsor is serious about intending to assume the required local responsibilities once the project has undergone more detailed planning.

If you have any questions or would like to discuss the matter further, please feel free to call me at 217/782-4637 or Bob Culli at 217/782-4605.

Sincerely,

Melvin Allison, Chief
Bureau of Planning

MRA:RLC:imc

cc: Pat Burke, COE
Rich Roths, DeKalb County

STATE OF ILLINOIS }
COUNTY OF DEKALB } ss.

DATE December 10, 1984

I, Terry Desmond, DeKalb County Clerk and Keeper of the Records in DeKalb County, Illinois, do hereby certify that the attached is a true and correct copy of the original record on file.

(SEAL)

In witness thereof, I have hereunto set my hand and affixed the Seal of the County of DeKalb at my office in Sycamore, Illinois.

Deputy Clerk

Terry Desmond, DeKalb County Clerk

RESOLUTION

WHEREAS, in June of 1979, the DeKalb County Board requested assistance from United States Corps of Engineers under their Section 205 program to provide flood protection to the residents of Evergreen Village who have experienced recurring problems over the years, and

WHEREAS, in July of 1981, the County of DeKalb advised the Corps of Engineers that it would be unable to assume local sponsorship of the project due to the estimated $700,000 cost of the local share of the $2.7 million project, and

WHEREAS, in the intervening years, the rules have changed creating the possibility of a substantial reduction in the cost of the local share of said project, and

WHEREAS, the owner of said property has expressed an interest in participating financially if the project were ultimately deemed feasible, and

WHEREAS, it has been recommended by the Planning and Zoning Committee of the DeKalb County Board that due to the change in conditions, the County, in partnership with the Illinois Division of Water Resources and the owner of said property, authorize the Corps of Engineers to proceed to the next phase of the study with the understanding that such authorization represents a non-binding commitment on the part of DeKalb County to act as a local sponsor.

NOW, THEREFORE, BE IT RESOLVED that the DeKalb County Board does hereby authorize the United States Corps of Engineers to proceed to the next phase of the Evergreen Village relocation study.

PASSED AT SYCAMORE, ILLINOIS, THIS 19TH DAY OF SEPTEMBER 1984, A.D.

Chairman, DeKalb County Board

ATTEST:

County Clerk

Planning Department
(815) 895-9161 Ext. 190

February 3, 1987

Corps of Engineers
Colonel Neil Smart
District Commander
Clock Tower Building
Rock Island, IL 61201

Dear Colonel Smart:

Mr. Pat Burke from your Planning Division has informed DeKalb County that funding is available to continue the Evergreen Village Mobile Home Park relocation study.

The County is interested in continuing the study. The County Board resolution of September 19, 1984, expressed the extent of participation. Any change in this participation would be determined by the County Board.

A review of the past, present, and future actions would help the County in any future decisions.

Sincerely,

Merle Carter

Merle Carter
Building and Development Officer

MC/bl

Administration Building Sycamore, Illinois 60178

DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
CLOCK TOWER BUILDING – P.O. BOX 2004
ROCK ISLAND, ILLINOIS 61204-2004

REPLY TO
ATTENTION OF

April 20, 1987

Planning Division

NOTICE OF INITIATION

Reconnaissance Study
for
Flood Damage Reduction
De Kalb County, Illinois

The Rock Island District, Corps of Engineers, has initiated a reconnaissance study for flood damage reduction in De Kalb County, Illinois. Authority for the study is Section 205 of the 1948 Flood Control Act, as amended.

In 1981, the Corps conducted an Initial Appraisal of flooding problems along the East Branch of the South Branch Kishwaukee River in De Kalb County near Sycamore, Illinois.

The report indicated that a project to relocate the Evergreen Mobile Home Park would be in the Federal interest and warranted more detailed analysis. At that time, however, further study was terminated due to limited financial resources of the potential local sponsor, De Kalb County.

Recently, De Kalb County officials have requested the Corps to reactivate the study. Hence, the Corps will examine the relocation plan in more detail to reaffirm the Federal interest. The study duration is estimated at 12 months.

Throughout the investigation, you will be kept informed of the study progress.

Neil A. Smart
Colonel, Corps of Engineers
District Engineer

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RECONNAISSANCE REPORT
FOR
SECTION 205 FLOOD CONTROL

EAST BRANCH OF THE SOUTH BRANCH OF THE KISHWAUKEE RIVER
DE KALB COUNTY, ILLINOIS

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